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ABSTRACT

Patterns of communication among residents of a predominantly rural county in Ohio were analyzed in 1975 to examine behavioral and attitudinal patterns regarding mass communication systems, and to test the extent to which variations in attitudes toward mass media were a function of variations in socio-economic and demographic characteristics. Hypotheses addressed three issues: the extent to which rural people relied upon mass media for informational needs; attitudinal dispositions toward mass media; and the explanation of the expected patterns of variations in these dispositions. Respondents (N=345) were predominantly older males and about 45% reported that they were engaged in either full or part-time agriculture. After ranking the five most important county problems (lack of jobs, crime, poor roads, poor leadership, and poor schools), respondents provided information on their use of mass media. The results revealed a high level of mass media usage for all types of informational needs, general satisfaction with the media, low level of perceived credibility in television news reporting, and low ability to predict variations in attitudes about credibility from knowledge of demographic characteristics and other social-psychological orientations. Reliance on mass media had become a dominant pattern of communication within the county. (BRR)

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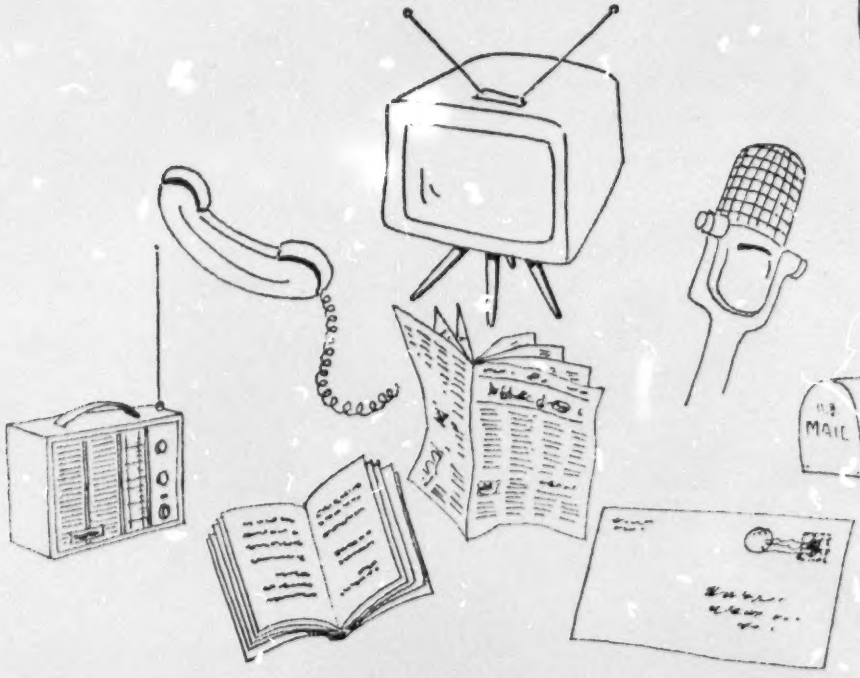

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PATTERNS OF COMMUNICATION IN A RURAL POPULATION

PEGGY J. ROSS and TED L. NAPIER[1]

THE PROBLEM

The importance of effective communication in programs of planned technological and social change has been emphasized by both researchers and applied practitioners (8, 23). The ability to communicate information about program activities to client groups has been generally recognized as one requisite for the realization of developmental goals. While the process of information dissemination functions as a major means for agencies to inform and educate client populations about their programs, it is increasingly being utilized as a mechanism to involve citizens in the decision-making process relative to program formulation (25).

Traditionally, communication tactics for developmental purposes have been geared in part to the dominant communication patterns in the population. With expanded technological capabilities and the resultant increased popular use of mass communications, change agents operating within cities have increasingly used mass media as sources for communication (19, 21). In contrast, developmental specialists in rural areas have relied more heavily than their urban counterparts on traditional oral communication via interpersonal contacts to disseminate information (5, 13). However, since the early 1960's, evidence (1, 23) has suggested that previous differences in rural and urban communication patterns may be disappearing. If true, developmental strategies based on predominantly oral communications tactics have become outmoded.

The general research question is: What are the dominant patterns of communication in rural areas? More specific questions which might be asked are: To what extent do rural residents use mass media relative to other media types? What types of information sources (mass and other media) are typically utilized for different kinds of informational needs? How do rural residents feel about the mass media? For example, do rural residents believe that the mass media sources, such as television, are credible sources of news about national and world events? What factors contribute to the explanation of variation in attitudes toward the mass media? This report deals with research which attempted to contribute insight into these questions.

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The research was organized on the belief that answers to these questions would be potentially beneficial in two ways. One was the hope that answers to those questions would provide insight into the role that mass media play in satisfying informational needs of rural people and would demonstrate how rural people feel toward mass media and their growing importance as major mechanisms for dissemination of information. A second more practical contribution which could come from research of this type was that the results might focus attention upon new and more effective strategies for disseminating information about programs and activities undertaken to make rural communities better places in which to live.

Purpose and Objectives

The general aim of the research was to examine patterns of communication among residents of a predominantly rural county in Ohio selected for study. Results of the study are organized around two analytical objectives. The first objective was to examine behavioral and attitudinal patterns regarding mass communication systems. The second objective was to test the extent to which variations in attitudes toward mass media held by rural residents are a function of variations in socio-economic and demographic characteristics.

Theory and Hypotheses

In pursuance of the research objectives, several major hypotheses derived from sociological and communications theory were formulated to address the following issues: 1) the extent to which rural people rely upon the mass media for informational needs, 2) attitudinal dispositions toward mass media, and 3) the explanation of the expected patterns of variations in these dispositions.

The first hypothesis was deduced from the theory of societal scale (10, 34) as applied to changing communication forms in the rural-urban components of a society (*e.g.*, see 20). The central notion of scale is associated with the level of technological/economic development of a society reflected in technological and social changes. As a society modernizes (or increases in scale), evidences of change appear in several forms, including utilization of mass communications and transportation systems, reliance on non-animal energy sources, and emergence of new patterns of social organization and social control. The latter, which are characterized by a high degree of structural

differentiation and social integration, function both as mechanisms for as well as by-products of increases in scale. It is important to note that, while changes in scale affect all parts of a society, change does not occur in all parts at the same time or the same rate.

Greer (10) maintains that a need for new forms of social control prompts growth in both the range and content of communication flow which are concomitants of increasing interdependence among different segments of a society. Inevitably, reliance on mass media as major communications mechanisms takes place first in the urban sector. Diffusion to the rural sector occurs slowly at first and later rapidly as linkages between rural and urban become greater in scope and number.

As a developed and complex society, the United States would obviously be classified as high scale compared with other societies in the world. Basic principles of the scalar model are apparent in several areas, especially the shift to non-animal energy sources in production. While the shift from oral to mass communication modes has been operative for a long period of time in urbar areas, farm populations have relied more extensively on oral communication.

As the scale of society has increased, so have the economic and social linkages between farm and nonfarm sectors (17). In order to carry out the daily routines of competition in the market place, it has become necessary for the modern farmer to utilize mass media to secure vital occupational information such as farm prices and other market information in a very rapid manner. In turn, the reliance on mass media for other information needs had permeated all aspects of daily rural living. In a Michigan study (22) which analyzed informational patterns of rural adults, for example, the major finding was that respondents relied substantially on mass media to obtain information concerning a wide range of issues involved in everyday life. Given the increasing scale of the society which demands both rapid dissemination of information and the necessity for rural people to remain integrated in the high scale society, it is hypothesized that: *Mass media will be utilized as informational sources to a greater extent than interpersonal sources for all types of informational needs.*

The remaining hypotheses underlying the study were drawn from literature on mass communications. These hypotheses deal mainly with selected attitudinal orientations of mass media users and potential users, specifically regarding perceptions about the credibility with which mass media sources meet basic informational needs.

Literature on mass communications (11, 15, 35) generally acknowledges that the psychological perceptions held by individuals toward a communication source affect behavior relative to the source, both in terms of usage and responses to content. Klapper (15) noted that:

> "Audiences have been shown, for example, to respond particularly well to specific sources because they considered them of high prestige, highly credible, expert, trustworthy, close to themselves, or just plain likeable."

Although the empirical evidence on psychological dimensions of mass communications behavior is both sparse and lacking in methodological precision, findings have been consistent in some areas. First, there is a notable tendency for Americans to have favorable attitudes toward mass media, whether the attitudinal evaluation be defined as "believability" (24, 27), "fairness" (3), "trust" (9), or "completeness" (12). However, degree of favorability in evaluations varied by media source. While newspapers were consistently identified as the source relied on for the most kinds of information, television was found to lead the field of mass media sources in favorable evaluations (3, 24, 29). On the basis of the findings from these and other studies, it is hypothesized that: *The number of individuals expressing favorable attitudes toward the media will be greater than the number expressing unfavorable attitudes.*

The matter of differential selectivity is important to any discussion of the relevance of attitudinal orientations of media audiences to media responses. Individuals who comprise media audiences neither feel nor act collectively to the stimuli of mass media or its content; rather, an element of selectivity (6, 28, 30, 35) is involved. Individuals use, feel about, and respond to mass media differently.

Considerable research has examined the factors which are associated with differential selectivity associated with media use, and both sociological and psychological explanations have been given. The former assumes that differential response to media is due to variations in social and demographic traits. The major assertion is that the reason people use and respond to media differently is because of differences in characteristics such as age, sex, education, and employment status. The latter is based on the assumption that differential selectivity results from variation in personality structures, whereas an individual's behavior toward a media source or its content is oriented to his own interests, beliefs, values, and opinions (35). In other words, people select, utilize, and respond to media stimuli relative to their own value and belief systems. Furthermore, when content is unacceptable to previously held viewpoints, there is a tendency to tailor such communication so that it becomes acceptable (30).

Several studies (3, 9, 24, 27, 32, 33) have examined the bivariate association between social and demographic characteristics and differences in mass media attitudes and behavior. Age, sex, and education were found frequently to be correlated with differential responses to media, with patterns varying from source to source. For example, research findings generally show that females, younger people, and non-college-educated evaluate the credibility of television more favorably than males, older persons, or college-educated. Conversely, higher evaluations of the credibility of newspapers were likely if the respondents were male, older, or college-educated. Other studies have concentrated on the relationship between extent of media use and attitudes (14, 32). Although mass media use in some form remains high for all categories of people, Steiner (32) found that television non-watchers tended to have negative attitudes toward the media.

Based on the assumption that persons tend to make judgments of favorability along lines which are compatible with their personal interests, beliefs, values, and opinions, several studies have considered psychological variables. Bower (3) found that political orientation, such as conservatism, was related to negative attitudes toward the mass media, particularly television. The work by Westley and Severin (33) revealed that higher evaluations of credibility of media sources were associated with higher degrees of community involvement.

Although both sociological and psychological explanations of differential selectivity have been supported, in part, by research evidence, neither demographic characteristics nor attitudes alone seem sufficient to differentiate media audiences. Rather, overlapping multivariate models are needed (6). Therefore, the final hypothesis which is tested in this study is: *Variations in attitudes toward the media will be a function of demographic characteristics and social-psychological characteristics of the individual.*

Research Procedures

The research was based on information obtained in the Spring of 1975 from a probability sample of residents of a predominantly rural county in north central Ohio. The county was purposely selected to obtain an area with a high proportion of rural residents (using census criteria) and with a major occupational orientation toward production agriculture. The county was believed to be generally representative of other rural counties in the state but, of course, the extent to which the results are considered applicable to an understanding of communications systems in similar areas is influenced by the extent to which the county is representative under the limitations of the sample noted below.

TABLE 1.—Selected Characteristics of Sample.

Characteristic	Sample Value	Sample Base N
Percent Male	68.4	344
Mean Age	46.7	343
Mean Years Education	12.0	340
Median Income	12,000	277
Percent Farming Full-Time	14.1	341
Percent Farming Part-Time	29.6	341

Sample: The original sample consisted of 1,000 residence points systematically drawn from a commercial directory of all residence points in the study county. A pre-tested questionnaire was mailed with a cover letter to the name listed in the directory as household head. In case of non-response, a second follow-up contact was made. Approximately 35%,[2] or 345 of the original sample, returned usable questionnaires.

Selected characteristics of the respondents are shown in Table 1. Respondents were predominantly older males of a slightly higher socio-economic status than the overall state data. About 45% of the respondents, compared to 10% in the state, reported that they were engaged in either full or part-time agriculture. Only 14% indicated that they were engaged in farming on a full-time basis.

To reveal how respondents evaluated problems of their county, instructions were given to rank the five most important of a selected list of problems. Mean rankings which show how respondents evaluated the relative importance of selected problems appear in Table 2. Lack of jobs, indicating the current nationwide issue of unemployment, was designated as the most important problem, followed by crime and poor roads.

[2]A return rate of 35% is not uncommon for mail surveys. However, results must be viewed in light of any limitations introduced by selective return of data-gathering instruments.

TABLE 2.—Ranked Importance of Community Problems.

Selected Problems	Mean Rankings*	Base N
Lack of Jobs	2.16	222
Crime	2.43	227
Poor Roads	2.74	137
Poor Leadership	2.81	125
Poor Schools	3.15	109
Lack of Recreational Facilities	3.28	139
Poor Services	3.28	106
Health Services	3.36	91
Poverty	3.66	95
Pollution	3.71	62

*Low values reflect greater importance of the problem

Data: The questionnaire which furnished data for the study elicited a wide range of information from the respondents, including 1) major sources used for different kinds of informational needs; 2) patterns of usage of mass media, such as print and electronic sources; 3) attitudinal items concerning mass media; and 4) socio-economic, demographic characteristics of respondents and their households.

Operational definitions of the key variables in the study are:

1. **Extent of Source Use** was measured as the degree to which each of 13 information sources was designated as first, second, or third choices of "most important" sources for 18 kinds of information.
2. **Perceived Credibility of Mass Media** was measured as scores derived in a factor analytic scale based on Likert-type responses to 12 attitudinal items. These items were also used in one phase of the analysis as single-item indicators of the variable.
3. **Frequency of Use of Mass Media** referred to daily numbers of hours: a) listening to radio, b) watching television, and c) number of newspapers read daily.
4. **Community Satisfaction** was represented by a self-designated rating of 0-10, with 0 indicating complete dissatisfaction and 10 complete satisfaction with the respondent's community.
5. **Political Orientation** was measured by a self-designated rating of 0-10, with 0 indicating ultra-conservative and 10 ultra-liberal.
6. **Community Participation** was defined as the number of organizational memberships reported by the respondents.
7. **Education** referred to the number of years of school completed.
8. **Farming Status** referred to a four-category classification: part-time farming, full-time farming, rural non-farm, non-farm.
9. Measures of several variables such as age and **sex** are self-explanatory; measures of other variables which were used mainly for descriptive purposes are discussed along with the presentation of the results.

Methods

The analysis was carried out in two phases and involved the use of both descriptive statistics and tests of significance. Two hypotheses were tested directly. The third was tested through attention given to the relative predictive utility of a number of factors to explain variation in the dependent variable.

The first phase of the analysis centered around identification of major behavioral and attitudinal patterns of communication for the respondents. The decriptive aspects of the analysis relied on tabular presentations of the data along with summarizing measures, such as measures of central tendency. One sample chi-square test (4) was used to evaluate the merits of the hypothesis relative to anticipated use of the mass media as the primary means of securing information. Basically, the chi-square statistic used in the single-sample case tests the null hypothesis that an empirically determined distribution is not significantly different from a theoretically determined distribution. Equal distribution across the categories was assumed, and the .05 probability level for significance was established.

Two statistical procedures were involved in the second phase of the analysis, where the main focus was the analysis of the data relative to perceptions of the media. A scale was developed from attitudinal items associated with perceived credibility of television news, using factor analysis. Factor analysis is being used increasingly for scale construction and validation (26), and in this instance a scale was developed for the attitudinal variable by factor analyzing the responses to a series of Likert-type items which were scored 1 to 5. The initial factor solution was rotated using the varimax orthogonal method, and factor scores were derived from the results. Finally, stepwise regression analysis of 10 independent variables against the factor scores was conducted to assess the relative predictive ability of the variables to account for variation in the dependent variable, which was termed perceived credibility of mass media.

MAJOR COMMUNICATION PATTERNS

Few would dispute the observation that mass communication has become a dominant feature of American life. Yet, until recently, the belief that oral communication patterns dominated rural social organization was reflected in both research literature and in the strategies and tactics employed by change agents to communicate with their rural clients. For example, county personnel of the Extension Service have traditionally relied on interpersonal contacts (county meetings) more frequently than on mass media to disseminate program information. In this section, communication patterns in a rural population are examined, through statistical tests of two hypotheses and presentation of other descriptive data indicative of communication patterns.

Frequency of Media Use

Data showing the frequency with which the respondents used four mass media sources appear in Table 3. More than 90% of the respondents re-

ported that they engaged *daily* in television watching, radio listening, or newspaper reading. Nearly 90% read magazines regularly, whereas more than half received one or more special interest magazines.

On the average, respondents listened to the radio approximately 2 hours and watched television approximately 4 hours a day. These figures, in comparison, were similar to recent statistics for national television patterns, which showed that the respondents watched a median number of 2.6 hours daily in 1968 (24). Another study revealed an average of 5.1 hours (3) for the combined household members. These data suggest that the extent of electronic media use in the Ohio study is similar to the patterns from more comprehensive surveys.

Comparison of time frames for use of radio and television is represented graphically in Figure 1. More people (more than 50%) listened to radio in the early morning hours between 6 and 8 a.m. than at any other time of day. Except for the late afternoon, less than one-third were tuned in at other time periods during the day. Television viewing tended to take on a different time-frame. Less than one-third of the respondents were watching television at any time period before 6 p.m.; the number of respondents involved rose sharply to include from 65% to 75% between the hours of 6 and 10 p.m.

TABLE 3.—Measures of Mass Media Usage.

Measure	Value	Base N
Radio		
Percent listening to one or more stations regularly	91.9	335
Mean number of hours listening daily	1.85	328
Television		
Percent watching one or more stations regularly	92.7	343
Mean number of hours watching daily	3.9	338
Newspapers		
Percent reading one or more regularly	94.8	344
Magazines		
Mean number read regularly	3.5	345
Percent reading one or more regularly	88.1	345
Percent receiving one or more special interest magazines	55.9	345

Sources of Information

One of three hypotheses tested in this study was that mass media would be utilized as informational sources to a greater extent than interpersonal contact for all types of information needs. Findings reported in Table 4 clearly substantiate this assertion. The findings show that a mass media mechanism was se-

TABLE 4.—First, Second, and Third Choices of Sources for Selected Types of Information Classified* as Mass Media or Interpersonal Media.

Type of Information	First Choice Sources			Second Choice Sources			Third Choice Sources		
	Mass Media	Interpersonal	Base N†	Mass Media	Interpersonal	Base N†	Mass Media	Interpersonal	Base N†
New Agricultural Practices	59.2	40.8††	169	63.3	36.7**	150	49.3	50.7 n.s.	136
Religious Information	72.3	27.7‡	191	67.7	32.3‡	158	49.2	50.8 n.s.	132
Weather Reports	97.6	2.4‡	250	97.4	2.6‡	228	82.4	17.6‡	187
Information About Occupation	77.7	22.3‡	197	67.5	32.5‡	157	49.6	50.4 n.s.	125
New Community Development Programs	73.8	26.2‡	183	60.8	39.2**	148	37.4	62.6**	115
Social Activities	73.9	26.1‡	176	51.3	48.7 n.s.	152	36.5	63.5**	126
Consumer Information	91.6	8.4‡	190	89.0	11.0‡	164	78.5	21.5‡	135
Entertainment	91.7	8.3‡	217	80.4	19.6‡	189	70.1	29.9	157
Local School Issues	79.3	20.7‡	232	50.3	49.7 n.s.	199	34.4	65.6‡	163
General Community Problems	70.3	29.7‡	232	61.2	38.8**	214	39.7	60.3**	189
Local News	93.7	6.3‡	255	76.5	23.5‡	238	48.7	51.3 n.s.	195
National News	99.2	0.8‡	251	99.6	0.4‡	233	92.8	7.2‡	208
Farm Market Prices	86.9	13.1‡	191	70.6	29.4‡	170	64.7	35.3‡	136
Taxing Issues	81.0	19.0‡	221	77.8	22.2‡	189	65.8	34.2‡	161
Local Election Candidates	83.0	17.0‡	229	62.4	37.6**	202	45.2	54.8 n.s.	166
National Election Candidates	97.4	2.6‡	233	95.4	4.6‡	216	84.5	15.5‡	193
Local Sports	91.2	8.8‡	204	87.3	12.7‡	181	49.6	50.4 n.s.	137
National Sports	98.4	1.6‡	193	97.8	2.2‡	179	92.5	7.5‡	160

*Sources classified as mass media were radio, newspapers, television, books, special interest magazines, extension bulletins; interpersonal sources include public officials, extension agents, neighbors, equipment dealers, and grain elevator operators.

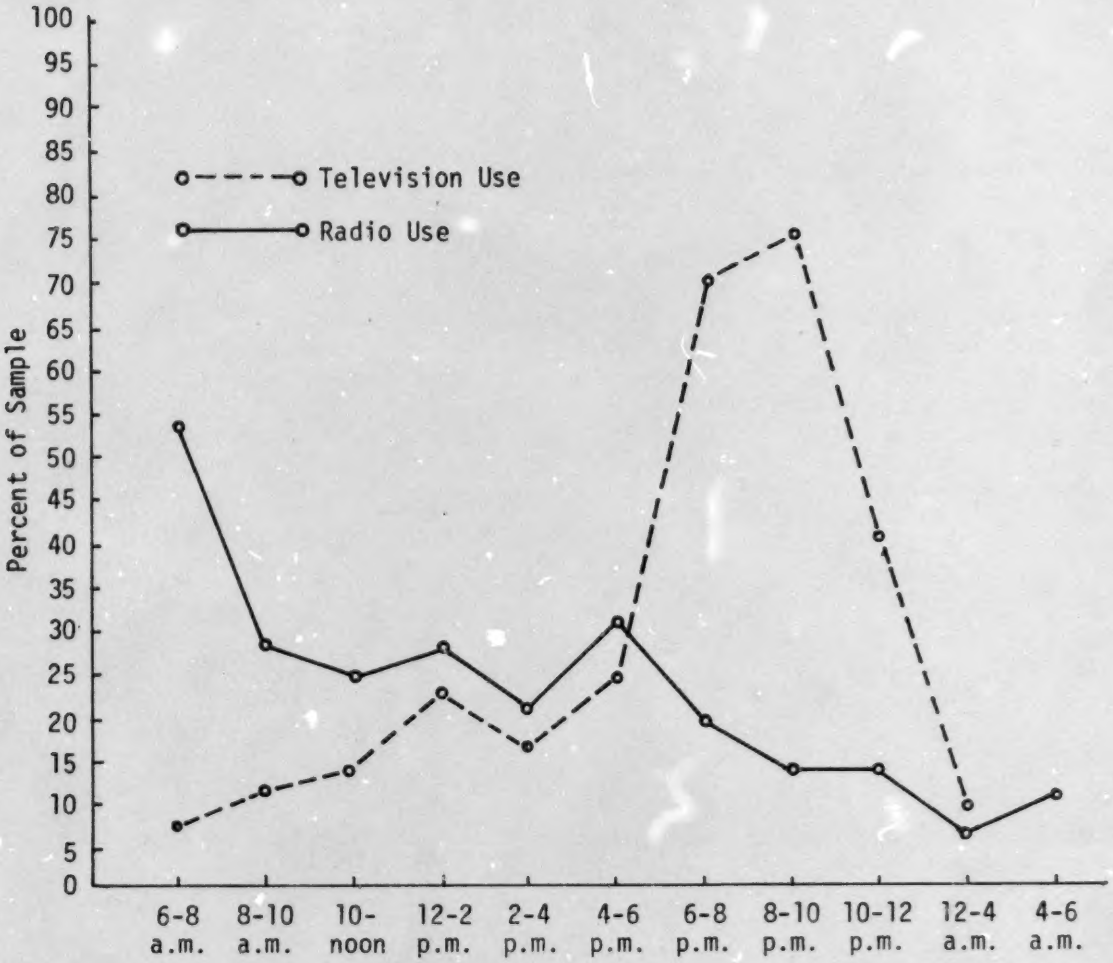
†Number of persons who indicated source at the particular rank, i.e., one, two or three. Data for number indicating that they do not seek the informational type were excluded.

‡Single-sample chi square values significant at .001 level of probability.

**Single-sample chi square values significant at .01 level of probability.

††Single-sample chi square values significant at .05 level of probability.

FIG. 1.—Radio and television use by time of day.



Time of Day	Radio (N = 345)	Television (N = 345)
6-8 a.m.	52.8	7.5
8-10 a.m.	27.0	10.4
10-12 noon	24.6	13.9
12-2 p.m.	28.1	23.5
2-4 p.m.	20.0	16.5
4-6 p.m.	31.0	24.1
6-8 p.m.	18.0	69.0
8-10 p.m.	13.8	74.8
10-12 midnight	13.9	39.7
12-4 a.m.	6.4	8.1
4-6 a.m.	10.4	—

TABLE 5.—Most Important Sources for Selected Types of Information.

Type of Information	Public Officials	Radio	County Extension Agent	Books	Newspapers	Neighbors	Special Interest Magazines	Extension Bulletins	Equipment Dealers	Grain Elevator Operators	Family Members	Television	Other	Don't Seek This Type of Information
New Agricultural Practices (N=246)	0.0	5.7	17.8	2.8	6.5	3.2	[20.7]	3.6	3.2	2.8	0.8	1.2	0.4	31.3
Religious Information (N=242)	0.4	5.8	0.0	[24.4]	15.7	1.2	6.2	0.4	0.0	0.0	5.8	4.5	14.5	21.1
Weather Reports (N=257)	0.8	[58.4]	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.4	33.8	1.2	2.7
Information About Occupation (N=242)	1.7	4.1	2.1	18.2	10.3	0.8	[25.6]	3.3	2.1	0.8	1.2	1.7	9.5	18.6
New Community Development Programs (N=243)	9.1	6.2	2.5	0.0	[47.3]	6.2	0.0	0.8	0.0	0.0	1.2	1.2	0.8	24.7
Social Activities (N=247)	0.4	5.7	0.0	1.2	[43.7]	9.3	0.0	0.4	0.0	0.0	6.5	1.6	2.4	28.8
Consumer Information (N=244)	1.2	9.9	2.9	4.9	[30.3]	0.0	13.9	5.3	0.0	0.0	1.2	7.0	1.2	22.2
Entertainment (N=246)	0.0	7.3	0.0	2.8	[35.4]	0.4	1.6	0.0	0.0	0.0	5.3	33.8	1.6	11.8
Local School Issues (N=255)	7.8	7.5	0.0	0.4	[62.8]	2.7	1.2	0.0	0.0	0.0	4.3	0.4	3.9	9.8
General Community Problems (N=252)	11.1	11.9	0.8	1.2	[50.0]	10.7	0.0	0.4	0.0	0.4	3.2	1.2	1.2	7.9
Local News (N=263)	0.0	29.6	0.0	0.0	[54.4]	4.9	0.0	0.8	0.0	0.0	0.8	6.1	0.4	3.0
National News (N=258)	0.0	10.8	0.0	0.0	15.5	0.0	0.4	0.0	0.0	0.0	0.8	[60.8]	0.0	2.7
Farm Market Prices (N=259)	0.0	[43.6]	0.0	0.0	12.4	1.2	0.0	1.2	0.0	6.9	0.8	6.9	0.8	26.2
Taxing Issues (N=247)	13.8	7.7	1.2	0.0	[53.0]	0.8	0.8	0.8	0.8	0.0	1.6	8.9	0.8	10.6
Local Election Candidates (N=254)	7.5	7.1	0.0	0.0	[64.6]	3.9	0.0	0.0	0.0	0.0	2.0	3.1	2.0	9.8
National Election Candidates (N=253)	1.2	8.3	0.0	0.0	21.7	0.4	1.6	0.0	0.0	0.0	0.4	[58.1]	0.4	7.9
Sports (Local) (N=250)	0.0	18.0	0.0	0.0	[49.2]	2.8	0.0	0.0	0.0	0.0	4.0	7.2	0.4	18.4
Sports (National) (N=243)	0.0	10.3	0.0	0.0	11.9	0.0	0.4	0.0	0.0	0.0	1.2	[55.6]	0.0	20.6

lected as first choice for 18 of the information needs evaluated. In all instances except new agricultural practices, the choice was overwhelmingly in favor of the mass media. The differences were significant at the .001 level of probability in all instances except one.

Similarly, for second choice designations, a significantly higher number of respondents named mass media rather than interpersonal sources for 16 of 18 types of information. For the third choice designations, significant differences in preference of mass media over interpersonal sources were found for 8 of 18 informational categories. The number of persons who named interpersonal sources over mass media sources as their third choice of sources was significantly greater for three information categories: community development programs, local school issues, and general community programs. These deviations from the basic pattern of mass media use all involved information about local issues. In sum, the results of the analysis strongly support the hypothesized pattern of heavy reliance on mass media for informational needs. The data used to test the hypothesis are presented in detailed form in Tables 5, 6, and 7.

Interpersonal and mass media source groupings are disaggregated in Table 5. Percentages of persons designating each of 13 informational sources as the most important source for 18 different types of information are shown, with the model category in each instance designated. In every case, the model was a mass media source. Consistent with the findings of other studies, newspapers were identified as most important sources for 10 of 18 types of information. Print media (books or magazines) were named by the respondents most frequently as the most important sources of three types of informational needs. The electronic sources (television or radio) were chosen most frequently as the most important source for five types of information, all of which had a national orientation.

Obviously people do not rely on a single source of information about most issues. The data in Table 6, which reports the number of sources designated as important by type of information, support this assertion. More than one-third of the respondents designated three sources as important for all categories of information. Those who tended to rely on a single source for information of various kinds barely exceeded 10% for only four types of information.

Since the focus of the study was on rural populations, respondents were asked about sources of agricultural information. They were requested to rank eight sources of information for agricultural practices in order of importance. The question was not applicable to non-farm respondents who did not regularly seek agricultural information, and some of those who ranked the sources elected to rank fewer than eight. Mean rankings were calculated for each of eight sources and the findings are presented in Table 7. Consistent with previous findings, these data indicate that mass media were considered to be highly important sources of agricultural information. Farm magazines, newspapers, and radio were the three most frequently utilized sources of agricultural information. However, television and books (also mass media)

TABLE 6.—Number of Sources Designated as Important for Selected Types of Information.

Type of Information	Number of Sources Mentioned			Not Ranking
	One	Two	Three	
	Percent (N = 345)			
New Agricultural Practices	6.4	4.1	39.1	50.4
Religious Information	10.1	8.1	37.7	44.1
Weather Reports	7.2	11.9	53.9	27.0
Information About Occupation	11.6	9.3	36.2	42.9
New Community Development Programs	10.7	9.3	33.3	46.7
Social Activities	7.8	7.5	36.2	48.5
Consumer Information	7.8	8.7	38.8	44.7
Entertainment	8.7	9.0	45.5	36.8
Local School Issues	10.1	11.0	46.7	32.2
General Community Problems	5.8	7.0	54.7	32.5
Local News	5.5	12.2	56.5	25.8
National News	5.5	7.5	60.0	27.0
Farm Market Prices	7.2	9.3	39.4	44.1
Taxing Issues	9.9	7.8	46.6	35.7
Local Election Candidates	8.4	10.1	48.2	33.3
National Election Candidates	5.2	7.0	55.6	32.2
Local Sports	7.2	13.3	39.2	40.3
National Sports	5.2	5.8	45.8	43.2

TABLE 7.—Ranked Importance of Sources for Agricultural Information.

Source	Mean Ranking*	Base N
Farm Magazines	2.15	117
Newspapers	3.25	93
Radio	3.42	97
Neighbors	3.96	92
Extension Bulletins	3.99	90
County Extension Agent	4.16	86
Books	5.19	67
Television	5.34	74

*Low values reflect greater importance as informational source.

were ranked in seventh and eighth places. These findings may reflect the availability of agricultural information to rural population via the higher ranked sources rather than a preference for a source (2).

Perceptions and Attitudes Toward Mass Media

The results presented above reveal that mass media are relied upon to a very large extent as sources for information about issues of daily living. However, how do people using the sources feel about the media? Data designed to answer this question are examined below.

The respondents were asked to evaluate the three major media sources: newspapers, radio, and television. The respondents were requested to indicate their degree of satisfaction with a specific information source by noting whether they were: 1) completely satisfied, 2) basically satisfied, 3) dissatisfied, or 4) completely dissatisfied with the source relative to information provided via that particular source. Percentage distribution of results and mean scores determined by assigning values of 1 (complete satisfaction) to 4 (complete dissatisfaction) are shown in Table 8. From these data, it is apparent that respondents were generally favorable toward the three media as informational sources. Not less than 75% reported satisfaction with any source. A slightly higher proportion of the residents expressed dissatisfaction with newspapers than with the electronic media. These findings are consistent with national trends (3).

TABLE 8.—Comparisons of Perceived Adequacy of Media Sources to Satisfy Informational Needs.

Adequacy to Satisfy Informational Needs	Source: Newspapers (N = 331)	Radio (N = 316)	Television (N = 327)
Completely Satisfied	14.8	23.8	23.2
Basically Satisfied	70.7	68.0	63.9
Not Adequate	10.6	4.7	9.2
Completely Inadequate	3.9	2.5	3.7
Mean Score	2.04	1.85	1.93

Tests of the hypothesis about attitudes toward the mass media were conducted through the use of chi square statistics applied to single sample tabular data. Twelve statistical comparisons of number of respondents who expressed favorable responses with the number who expressed unfavorable responses to attitudinal statements were made to test the hypothesis that a greater number of respondents will have favorable rather than unfavorable attitudes regarding the credibility of television news. Under the null hypothesis of chance occurrence, predicted frequency of favorable and unfavorable attitudes was 50:50.

Frequency of positive responses to attitudinal statements about the credibility of television as a source of news reports appears in Table 9. Although findings revealed significant differences between the number of respondents expressing positive and those expressing negative attitudes about bias in the national news, the direction of the differences in nine in-

TABLE 9.—Statements Reflecting Perceived Credibility in Television News.

	Item	Percent Who Responded Favorably (N = 345)
1.	**Agreed** that news reporters should report the news without making interpretation of the issues being reported.	75.1*
2.	**Disagreed** that the national news system should be subject to more control by the government.	67.5
3	**Agreed** that I am basically satisfied with national television news reporting.	50.5 n.s.
4.	**Disagreed** that national television news personnel are politically too conservative.	39.2*
5.	**Agreed** that national news reporting by CBS, NBC, and ABC is a true picture of what is happening in the world today.	31.6*
6.	**Agreed** that editorial comments by news reporters tend to be in agreement with my own interpretation of the news being reported.	29.6*
7.	**Agreed** that national news is presented in a very honest manner.	26.3*
8.	**Agreed** that national news reporting basically reflects the opinion of most Americans on most issues.	24.3*
9.	**Disagreed** that national television news is basically reported in a very biased way.	22.3*
10.	**Disagreed** that the interpretation of news reporters is often misleading.	15.0*
11.	**Disagreed** that local television news reporting is much more objective than national news reporting.	16.5*
12.	**Disagreed** that national news interpretation as presented on the television has a very strong influence upon the opinions of most Americans.	7.8*

*Single-sample chi square values significant at .001 level of probability.

stances was in opposition to the predicted direction of difference. Thus, the data support an alternate hypothesis that more people have unfavorable attitudes, *i.e.*, perceive the news to be biased, than have favorable attitudes concerning bias in the news. It is interesting to note that the two items consistent with the original hypothesis stress what ought to be (items 1 and 2), whereas the remainder of the items are oriented toward what is. More attention is given to findings about attitudes toward credibility of mass media in the following section.

The findings on communication patterns in a rural population may be summarized in two major points. First, the findings basically demonstrate that the respondents primarily tended to rely on mass media for the types of information evaluated. This suggests that the use of the mass media has become a dominant pattern in rural areas. Mass media appear to have become an integral feature of routinized patterns of everyday living for the study respondents. The attitude component of the study was less conclusive since the findings did not support, in directionality, the hypothesis dealing with media bias. The respondents felt that the credibility of mass media, specifically television as a news source, was highly suspect. Yet, descriptive findings on satisfactions (Table 8) did not substantiate the finding of unfavorable attitudes. General evaluations of satisfaction seemed to be highly favorable, but the level of biasing perceived by the respondents was also high. This may indicate that perceptions of biasing and other attitudinal evaluations are not correlated. This lends credence, at least indirectly, to the notion of differential selectivity whereby exposure, use, and response to media are functions of an individual's own belief and value structure.

FACTORS ASSOCIATED WITH SELECTED ATTITUDES

The third and final hypothesis which was investigated attempted to explain the variation in attitudes toward the national mass media through the use of selected demographic characteristics and socio-psychological orientations of the individual. A composite scale of perceived biasing of television reporting was developed through the use of factor analytic techniques. The hypothesis was examined through a step-wise regression of selected measures of 10 independent variables, with the attitude scale scores treated as the dependent variable.

Construction of Composite Scale

Factor analysis is increasingly being used to develop and validate (31) composite scales of constructs. Following the general procedure (31) for developing a scale from a pool of items considered to be indicators of a construct, where scale values are factor scores derived from least squares regression procedure of determining optimal weights for each variable in the scale, a composite scale was constructed from the items presented in Table 9.

It was deemed desirable to eliminate inconsistent items to form a composite scale to measure biasing prior to actual scale construction. Therefore, strongly agree to strongly disagree responses for the 12 items were assigned scores of 1 to 5, with the most positive response for the item receiving a score of 5. The responses for the 12 items were factor analyzed and items were eliminated if the proportion of variance explained by the factor solution in the variable, or the communality, was substantially lower than communalities of other variables. Through this procedure, seven items were identified as indicators of perceived credibility. Since the variables remaining

TABLE 10.—Zero Correlations of Perceived Biasing Items with Means and Standard Deviation (N = 345).

Item	2	3	4	5	6	7	$\bar{X}$	s
1. National T-V news is basically reported in a very biased way.	0.13	0.07	0.17	0.31	0.14	0.04	2.55	1.07
2. National T-V news reporting basically reflects the opinion of most Americans on most issues.	—	0.51	0.48	0.34	0.44	0.36	2.61	1.13
3. I am basically satisfied with national T-V news reporting.		—	0.67	0.30	0.57	0.42	3.17	1.13
4. National news is presented in a very honest manner.			—	0.33	0.63	0.48	2.76	1.11
5. The interpretation of news reporters is often misleading.				—	0.37	0.20	2.28	1.05
6. National news reporting by CBS, NBC, and ABC is a true picture of what is happening in the world today.					—	0.46	2.87	1.13
7. Editorial comments by news reporters tend to be in agreement with my own interpretation of the news being reported.						—	2.93	1.03

were assumed to be primary indicators of the dependent variable, the decision followed that the first factor which emerged would be considered as a valid measure of the variable of interest (31).

Table 10 shows the matrix of zero order correlation coefficients which was factor analyzed[3] to construct a scale of perceived credibility. The initial solution yielded two factors, which were orthogonally rotated for a final solution, from which the factor scores on the first factor were computer-derived as measures of the composite scale.

Table 11 shows the factor loading coefficients in the rotated solution for the first factor. Factor loadings for each variable formed the basis of weighting the variable in the factor scale. The first factor, considered to be the composite measure of perceived credibility, accounted for 47.1% of the total variance and 85.3% of the common variance in the variables.

The relative values of the factor coefficients are significant in that the weighted value of each variable in the composite scale is determined by the factor loadings. The method chosen for determining factor score values uses all items in the matrix and their respective loadings. Thus, an item with a low factor loading has a low weighted value in the composite scale, with the converse true for items with high loadings.

[3]A common-factor method, principal factor with iterations, was used. Orthogonal varimax rotation resulted in the solution from which factor scores were derived.

TABLE 11.—Rotated Factor Solution of Perceived Biasing Items.

Item	Factor Coefficients
1. National T-V news is basically reported in a very biased way.	0.039
2. National T-V news reporting basically reflects the opinion of most Americans on most issues.	0.577
3. I am basically satisfied with national T-V news reporting.	0.784
4. National news is presented in a very honest manner.	0.794
5. The interpretation of news reporters is often misleading.	0.290
6. National news reporting by CBS NBC and ABC is a true picture of what is happening in the world today.	0.716
7. Editorial comments by news reporters tend to be in agreement with my own interpretation of the news being reported.	0.510
Percent of Total Variance Explained	47.1%
Percent of Common Variance Explained	85.3%

Regression Findings

Ten variables which represented measures of social and demographic characteristics and psychological orientations of respondents were selected on the basis of theory and research for regression analysis of the credibility scale. Operational definitions of the independent variables were discussed earlier.

A correlation matrix of the independent and dependent variables appears in Table 12. Correlation

TABLE 12.—Correlation Matrix for Selected Independent Variables and Perceived Credibility.

		X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}
X_1	Frequency Use: Newspapers										
X_2	Frequency Use: Radio	0.1510*									
X_3	Frequency Use: Television	—0.0430	0.1391*								
X_4	Community Participation	0.1429*	0.0755	—0.1358*							
X_5	Community Satisfaction	0.0560*	—0.1113	—0.1226*	0.1094						
X_6	Political Orientation	—0.0587	—0.0508	0.0529	—0.0316	0.0851					
X_7	Age	0.1426*	—0.1333*	—0.0349	0.0120	0.1786*	—0.1046				
X_8	Sex	0.0890	—0.0754	—0.1597*	—0.0070	0.0295	—0.0352	0.0399			
X_9	Education	0.0862	0.0484	—0.2304*	0.2160*	—0.0082	—0.0289	—0.2622*	—0.0110		
X_{10}	Farming Status	—0.1026	0.0503	0.2178*	—0.2081*	—0.0215	0.1011	—0.1188*	—0.0564	—0.0016	
X_{11}	Perceived Credibility	—0.0131	—0.0794	0.1373*	—0.1354*	0.0365	0.0850	0.1211*	—0.1278*	—0.2097*	0.0038

*Significant at .05, r of 0.1150 or greater needed for significance.

TABLE 13.—Stepwise Regression of Selected Variables on Perceived Credibility Scale.

Entering Variable	Step	Beta Coefficient	F-Ratio (B)	Multiple R	Adjusted R^2	R^2
Education	1	—0.2097	13.47*	0.2097	0.044	—
Education	2	—0.2111				
Sex		—0.1301	5.26**	0.2468	0.058	0.014
Number of Remaining Variables	8					

*Significant at .001 level, df = 1 and 293.
**Significant at .01 level, df = 1 and 292.

findings show that five independent variables (use of television, community participation, age, sex, and education) were significantly correlated with the scale of perceived credibility.

The step-wise regression findings presented in Table 13 demonstrate that two significant variables explained only 5.8% of the variance in the perceived credibility scale. In order of entrance in the regression model, education explained 4.4% and sex added 1.4% of explained variance to the final solution. The eight remaining variables failed to reduce the unexplained variance significantly. The two-variable regression equation in standardized regression form (Beta) was:

$Y = -0.21X_1 - 0.13X_2 + e$, where
Y = Perceived credibility scale scores
X_1 = Education
X_2 = Sex
e = error

The regression findings show that perceived credibility of television decreases with increasing education or if one is a male. In short, if the respondent was more highly educated and male, there was a slight tendency to feel that biasing was higher in news reporting via television than if one was less educated and female.

CONCLUSIONS AND IMPLICATIONS

Several conclusions about mass communication patterns among people living in a rural setting are suggested by the findings of this study. The results revealed: 1) a high level of mass media usage for all types of informational needs, 2) general satisfaction with the media, 3) low level of perceived credibility in television news reporting, and 4) low ability to predict variations in attitudes about credibility from knowledge of demographic characteristics and other social-psychological orientations.

A major conclusion in line with the primary thesis of this research is that reliance on mass media has become a dominant pattern of communication within the study county. Research evidence in this study strongly demonstrates that mass media are extensively used for all types of information and that media usage has become a daily, routinized part of everyday life. Not only do people use the media with regularity and frequency, but mass media usage has become habitual behavior. Televisions are turned on, radios are tuned in, and newspapers are scanned daily not just to obtain information or to be entertained, but as a behavioral pattern.

Mass media usage as habitual behavior explains, in part, a second conclusion suggested by the findings —that attitudes toward media are complex and varied. On the one hand, respondents in this study perceived media content, particularly news reports, to be highly biased. Yet, evaluations tended to be highly favorable in other areas, such as the satisfaction with the media to supply information about what is happening on the world scene. It may be that bias has been accepted as an inevitable feature of mass media. Or it may be that people tend to seek out media content which is in line with their own beliefs, values, and opinions. This raises the question of whether or not bias in news reporting is viewed as an unfavorable or undesirable feature of media content.

An hypothesis that may be suggested by the results for future research is that perceptions of mass media may be relatively inconsequential in affecting behavioral responses toward the media. If one accepts the major implication which has been drawn by the authors that mass media usage has become culturally ingrained, then one must accept that people will continue to read, listen, and/or watch the media regardless of how they feel about the content.

Implications for Future Research

A general implication to be drawn from the study is that more research on mass media is needed to better understand why people hold certain attitudes toward the media and why they use specific sources for information when they perceive the sources to be biased.

The amount of research conducted has been substantial, but the bulk of studies have addressed only a few of the issues surrounding mass media in today's society. One major orientation apparent in research done to date has been cross-media comparisons, and what factors are related to differential behavior toward different mass media sources. Little research, however, has addressed the question of why the people use specific media. A valuable research question thus concerns why do different media have different levels of credibility among client groups? Another interesting question involves how effective the activities initiated by the various media have been in improving credibility images?

Another area for research, addressed to some degree in political science and other disciplines, but to only a limited extent by sociologists, is the impact of media content on decision-making groups. Research on the effects of mass media has had a decidedly individualistic orientation, with emphasis on areas such as changes in individual voting behavior or rises in individual violence. However, more group-oriented research would be desirable.

Implications for Action

A practical implication, suggested by this study for development groups working with rural people, is that recognition should be taken of the importance of mass media in communication patterns. Many development agents have been steeped in a tradition of action which precludes extensive use of mass media to disseminate program information. In order to effectively utilize mass media, agents must become much more oriented toward new methods of information delivery which involve mass media.

Development agencies would be well advised to focus on the construction of new and comprehensive information systems, rather than merely encouraging haphazard use of media by their personnel. Agencies should take note of research results in planning information systems. It was noted in this study, for example, that people seek various media for different types of information.

Other research (7) has shown that media *content* is more important than *exposure* in shaping an individual's receptivity to change. Persons who use mass media mainly for entertainment will be less receptive to change than persons who tend to select news and public affairs programs. An effective information delivery system should also take into account the relative utility of mass media vs. interpersonal sources for different communication purposes with different groups of persons.

If the communication goal is to make a population aware of program goals and strategies, mass media may effectively be used to rapidly reach a large proportion of the population. The same is true for other types of educational activities. However, where the goal is to change attitudes or effect acceptance of a new innovative practice, interpersonal sources, following the two-step information flow notion,[4] would appear to be the most effective. Thus, an effective information delivery system makes extensive use of mass media, but combines the use of mass media and interpersonal sources into a package which uses them singularly and jointly at different stages in the action process to maximum utility.

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[4]The two-step flow of information hypothesis which originated in the work of Lazarsfeld, Berelson, and Gaudet refers to an indirect channel of information flow from mass media to opinion leaders to mass audience. The notion has also been applied in studies of diffusion of adoption practices where information about innovations passes from change agents to opinion leaders to potential adopters.

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